



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,538	01/28/2002	Jean-Claude Girard	DN2002014USA	3718
7590 03/08/2004				
Howard M. Cohn c/o Bruce Hendricks Dept. 823 The Goodyear Tire & Rubber Company 1144 East Market Street Akron, OH 44309-3531			EXAMINER MACKEY, JAMES P	
			ART UNIT 1722	PAPER NUMBER
DATE MAILED: 03/08/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/058,538

**Applicant(s)**

GIRARD ET AL.

**Examiner**

James Mackey

**Art Unit**

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-5, 7-15, 19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-15 is/are allowed.
- 6) ☒ Claim(s) 2-5, 19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1722

1. Claim 21 is objected to because of the following informalities: on line 11 of claim 21, "the mold press" lacks proper antecedent basis in the claim. Appropriate correction is required.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Allitt (U.S. Patent 4,154,790).

Allitt teaches bead molding rings 18, 19 for a tire mold, beach bead molding ring comprising a plurality of complementary, circumferentially alternated first and second segments 21, 20, wherein the first segments 21 are wedge shaped and have planar, axially oriented lateral faces 23 that converge towards a radially outward-facing bead molding surface 25, and wherein the second segments 20 have lateral faces 22 that are complementary to the first segment lateral faces; means 29, 30 for radially expanding the bead molding ring from a first outside diameter (less than the inside diameter of a tire bead, col. 2, lines 1-3) to a second outside diameter to form a circumferentially continuous radially outward-facing surface for molding the tire bead (col. 3, lines 55-59), including a cam ring 29, 30 attached to an axially-moving part 26, 28 of the mold press such that the cam surfaces 31, 32 of the cam ring interacts with complementary cam surfaces 33 on the radially inner portion of the first and second segments; radially aligned guide rods 36, 37 movably connecting each of the first and second segments to a surrounding sidewall plate 10 (via elements 50, 51) and 11, the guide rods restricting the first and second segments to

Art Unit: 1722

a radial movement only; and spring means 60, 61 for radially inwardly biasing the first and second segments.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allitt (U.S. Patent 4,154,790) in view of Bosseaux (U.S. Patent 6,238,193).

Allitt teaches a method for molding a green tire substantially as claimed, comprising loading the green tire into a mold comprising first and second bead molding rings 19, 18, the first bead molding ring 19 being a retractable bead molding ring composed of circumferentially alternated first and second segments 21, 20 such that radial expansion of the first segments 21 causes radial expansion of the second segments 20 (col. 3, lines 35-39), the first bead molding ring 19 being assembled together with a sidewall molding plate 10; passing an unmolded first bead of the tire firstly over the second bead molding ring 18 and secondly over the retractable first bead molding ring 19 while the retractable first bead molding ring is retracted to an outside diameter that is less than the inside diameter of the unmolded first bead (col. 2, lines 1-3); using axial movement of a portion 28, 30 of the mold press for driving radially-outward-only expansion (col. 3, lines 23-25) of the retractable first bead molding ring 19 to engage the unmolded first bead; and expanding a vulcanizing membrane 13 inside the tire to draw the second bead into engagement with the second bead molding ring 18 (see col. 4, lines 13-20).

Allitt does not disclose that the second bead molding ring is a non-expandable continuous ring

Art Unit: 1722

that is attached to a center post of the mold. Bosseaux discloses a method for molding a green tire comprising loading the green tire into a mold comprising first and second bead molding rings 14, 13, the first bead molding ring 14 being a retractable bead molding ring composed of circumferentially alternated first and second segments 141, 142, and the second bead molding ring 13 being a non-expandable continuous ring that is attached to a center post of the mold (via plate 31); passing an unmolded first bead of the tire firstly over the second bead molding ring 13 and secondly over the retractable first bead molding ring 14 while the retractable first bead molding ring is retracted to an outside diameter that is less than the inside diameter of the unmolded first bead; using axial movement of a portion 32 of the mold press for driving radial expansion (col. 6, lines 25 and 29-30) of the retractable first bead molding ring to engage the unmolded first bead; engaging the second bead with the second bead molding ring 13; and expanding a vulcanizing membrane 15 inside the tire. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Allitt by providing the second bead molding ring as a continuous ring attached to the center post, as disclosed in Bosseaux, in order to mold a tire having beads of differing diameter without unduly increasing the cost of the mold while maintaining the quality of the molding (as suggested in Bosseaux at col. 1, lines 44-55).

6. Claims 7-15 are allowed.

The prior art of record does not teach or fairly suggest a tire mold comprising first and second sidewall plates, first and second bead molding rings and an inflatable vulcanizing membrane, wherein at least a first bead molding ring includes a plurality of complementary, circumferentially alternated first wedge-shaped segments and second segments, means for radially expanding the first bead molding, guide rods which restrict the first and second segments

Art Unit: 1722

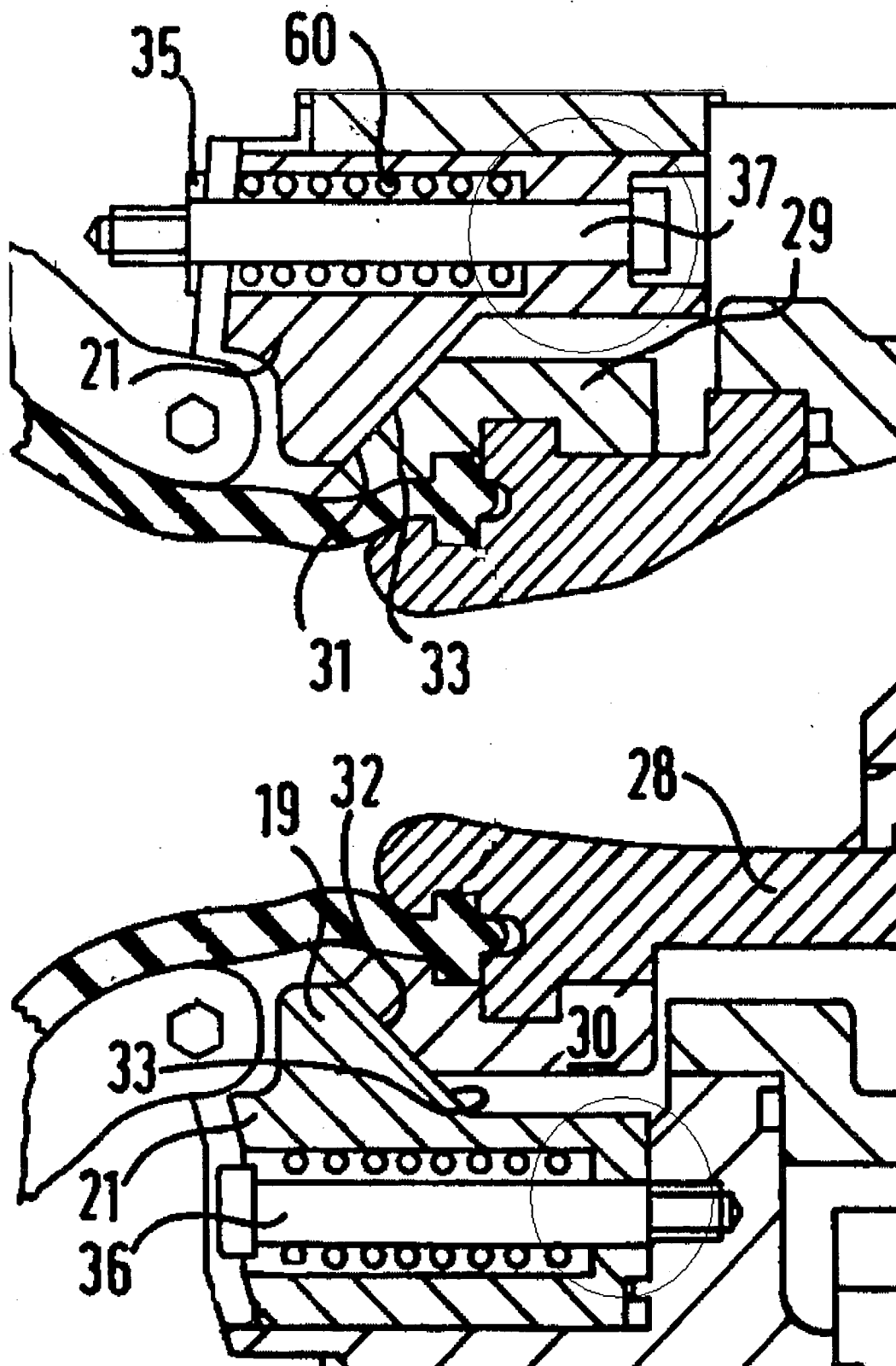
to radial movement only, each guide rod being mounted in a radially aligned mounting hole bored in one of the first and second segments, each mounting hole being aligned with a guide hole bored in the adjacent sidewall plate such that the guide rod slides within the radially-aligned guide hole, and springs radially-inwardly biasing the first and second segments, each spring residing in a spring holding hole bored in the adjacent sidewall plate and aligned with a spring pocket cut in an adjacent one of the first and second segments, as claimed in claim 7.

The closest prior art of record is Allitt, which discloses a tire mold including guide rods which restrict the first and second segments to radial movement only, and springs radially-inwardly biasing the first and second segments, the springs being positioned in a spring pocket in one of the first and second segments; however, Allitt does not disclose or fairly suggest that the guide rods are mounted in a mounting hole bored in one of the first and second segments such that the guide rod slides within a radially-aligned guide hole bored in the adjacent sidewall plate, and does not disclose or fairly suggest that the springs reside in a spring holding hole bored in the adjacent sidewall plate as well as the spring pocket, as claimed in claim 7.

7. Applicant's arguments filed 31 December 2003 have been fully considered but they are not persuasive.

Applicant argues that elements 36, 37 of Allitt are not guide rods but are merely bolts to hold springs 60, 61 in compression, and that Allitt teaches the use of keys and keyways 42-44 for guiding means. However, the Examiner contends that the rods 36, 37 of Allitt function to guide the segments (notwithstanding the use of additional guiding structure of the keys and keyways), since the rods 36, 37 closely engage with the segments during the radial movement of the segments, as clearly shown in the circled areas in the following drawing (see Figs. 2-3 of Allitt):

Art Unit: 1722



Art Unit: 1722

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

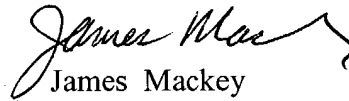
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 1722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James Mackey  
Primary Examiner  
Art Unit 1722

2/27/04

jpm  
February 27, 2004